**Study Guide for Test over 8.5 A Structure of Atoms and 8.5 B Protons and Electrons**

1. What are the 2 major structural components of an atom?
2. What are the 3 subatomic particles? Describe the location, charge, and mass

of each one.

1. In a neutral atom, which subatomic particles must be balanced (equal in number)?
2. What is the overall charge of the nucleus? Of the electron cloud?
3. Which part of the atom contributes the most to the mass of an atom? Which part of the atom contributes the most to the volume (space) of an atom?
4. What does APE stand for and what can you determine about an atom using this mnemonic device?
5. What does MAN stand for and what can you determine about an atom using this mnemonic device?
6. Which 2 subatomic particles do you add together to determine the mass of an atom?
7. Use APE MAN to determine the following:

Lithium- Carbon- Argon-

Atomic # Atomic # Atomic #

Atomic Mass Atomic Mass Atomic Mass

Protons Protons Protons

Electrons Electrons Electrons

Neutrons Neutrons Neutrons

1. What does the atomic number tell you and why?
2. What determines the identity of an atom and why?
3. What is an energy level in an atom?
4. Which energy level fills up first and how many electrons can it hold?
5. How many electrons can the other energy levels hold?
6. What is a valence electron and how does it determine the reactivity of an atom?
7. Which atom is more reactive, one with 6, 7, or 8 valence electrons? Explain.
8. Which atom is more reactive, one with 1, 2, or 3 valence electrons? Explain.
9. Describe the octet rule and how it relates to reactivity.
10. On the next page Make Bohr models for the following atoms:

Boron Sodium

Helium Beryllium

1. Put each atom in order from most reactive to least reactive.
2. Describe the charge of each atom after it become an ion by losing or gaining an electron-